

## Some practical terms



### Intermediate Mushroom Grow Kit Reishi - *Ganoderma Lucidium*

Thank you for purchasing our Mushroom Grow Kit! It contains reishi mushroom mycelium. To ease starting your adventure into the world of mushrooms, you are invited to read this instructive booklet. For more details and direct communication, please visit our website at [www.homegrownmushrooms.ca](http://www.homegrownmushrooms.ca) or send us a message at [info@champignons-maison.com](mailto:info@champignons-maison.com)

#### Conservation:

**No time to start your kit now?** No worries, simply put it in the fridge until the time is right!

- **Mycelium:** The mycelium is the mushroom's vegetative state. It is composed of many filaments named hyphae. In nature, it is usually below the soil surface or inside dead trunks. In your kit, the mycelium is the entire white block in the bag.
- **Substrate:** The substrate is the nutritive material in which the mycelium grows. At Homegrown Mushrooms, it consists mainly of coffee ground and sawdust recovered locally. An excellent way to add value to our residual materials!
- **Spores:** Spores are the reproductive cells of fungi. They are microscopic and each mushroom can produce hundreds of thousands of them. They are released by the gills or pores located under the mushroom cap.
- **Primordium:** A primordium (primordia in the plural) is a baby mushroom. The primordia look like small buttons or pinheads and are highly sensitive to dehydration.
- **Mushroom:** The mushroom is the reproductive organ. It's also the part we eat! The term mushroom is however often used to talk about the fungus, which is the whole organism.

## Instructions

- 1- The first step is to **let your mycelium age until it forms mushroom stems**. Open the paper packaging, take the bag out and unroll the top but don't open it. *Place the box and plate on a surface that will not be damaged by moisture when you start watering your mycelium*, somewhere away from heat sources, air conditioning or direct sunlight. Mushrooms need indirect light to grow.
- 2- **The stems are a red/brown antler-like formation**. They may form from the top or the side of the mycelium block. The first sign of mushroom formation is a darkening of the mycelium. Reishi grows slowly, be patient (can take up to a month). When antlers have grown 1 inch or more above the

mycelium block, **cut the top of the bag horizontally**, leaving 3 inches of sidewalls.

**3- Roll the bottom of the greenhouse** (the plastic bag provided) to make it stiffer. Then **put it over your kit to prevent from drying**.

**4- Remove the tent and spray the inside generously** at least 2 times a day. Then put it back on the mycelium block. This will provide the fresh air and moisture necessary for the growth of your mushrooms.

**5- Some of the antlers will start developing a cap**, others will continue to grow as antlers. A white to yellow tip or edge is a sign of healthy growth. If this edge looks dry or waxy, increase watering. If necessary, you may want to tape some of the holes on your greenhouse. If antlers grow 5-6 inches without forming caps, you might lack oxygen; cut bigger holes in your greenhouse to remediate.

**6- Harvest your mushrooms individually** when the white edge or tip has become brown. The edge and tips may become brown if the mushroom is not properly watered, misleading you to believe it is ready to harvest. Resuming proper watering should restart growth within a week. An other sign of mushroom maturity is the release of spores, appearing as a brown powder on surfaces. Reaching full maturity usually takes between 1 to 4 months.

**7- To harvest, cut the antler as close to the mycelium as possible**.

**8- To stimulate a new growth phase, fill the bag with cold water to submerge the mycelium** for 24 hours.

**11- Drain the mycelium block** by watering your plant or garden with what is now a rich liquid fertilizer.

**12-** Resume watering as usual. If no growth appears within a month, your Reishi probably need to run through new substrate or to be implemented in the garden

**13-** Once the substrate is exhausted, you can **give a second life to your mycelium** by inoculating logs or your garden. Watch the other side of this booklet or surf our website to find out how!

## Uses of the Reishi Mushroom

-You can collect the reishi spores while it grows, directly from the greenhouse with a spoon or a brush. They share many medicinal properties with the mushroom, with the advantage of being harvestable every other day.

-You can then dry your mushrooms whole or **slice them to make the drying process faster**. Note that dried reishi is hard to break. Once dried, you can use a blender to make a finer pieces.

-Reishi is usually **used to make teas and extractions**. The finer the Reishi pieces, the stronger the tea or extraction will be. Once you have made a tea, you can keep the pieces in the freezer for a second use. The second infusion will be weaker, but will also taste better. A strong drink would contain about 2 grams of dried reishi. But beware! Its taste can be quite bitter! Some will prefer adding maple syrup or almond milk to sweeten it a bit.

-Reishi is well known for its medicinal properties. A soft decoction can easily be integrated in any recipe using water and boost up the nutritional value of your meal. Try it in coffee, tea, oatmeal, soups, pasta and cake to explore what suits best your taste.

- Once many decoctions have been performed, the reishi will bring no more taste and properties to the water. You can then extract more antioxidant by sinking the spent mushroom into alcohol. 94% alcohol is more effective but needs to be mixed with decoction afterward to reach 40% before consumption. It is sometimes easier to put the spent mushrooms and spores directly in a 40% liquor and let sit for at least 6 weeks.

## Additional notes:

Reishi mushrooms prefer warm to mild temperatures so its favorite season is Summer!

## Problems and solutions

**P: The mushrooms dried up.** *This happens when the ambient air is too dry.*

**S:** Make sure the mycelium is away from heat sources, ventilation, air conditioning, or direct sunlight. Be sure to spray the moisture tent sufficiently. When there are no more droplets in the tent, it's time to spray again. If the problem persists, you can cover some openings of the moisture tent with sticky paper.

**P: Mold appeared.** *This can be caused by exhausted mycelium (spent substrate) or a spore full environment.*

**S:** In the case of a green mold, with clean hands, dab the infected area with 70% alcohol. If necessary, remove the mycelium from its bag. With a clean knife, cut out the infected area and discard it. Ideally, spray the inside of the mycelium bag as well as the mycelium block with peroxide at 3% concentration. Put the mycelium back in its bag. It is possible that the mold reappear. In the case of a black, pink or orange mold, throwing the mycelium away will be the best option.

## Gardening with the mushrooms

During opening and closing time of the garden, mushrooms turn out to be neat allies of the gardeners. When it is time to grow more food out of a limited gardening space, producing a homegrown fertilizer or mulch improver, upcycling pruning trees residues or taking care of dead leaves insitu, mycelium can be used to do more with less. (finding two truffles with one shovel)

Here is a basic strategy for mushroom gardener aficionados that can use homegrown mushrooms growing kits in a way that they transmute garden residues into food sources forever and ever more.

## Required materials:

**Ligneous material** or any "brown composting material"

A **soaking container** (temporary) as a barrel or a plastic tote

A **culture container** (a hole in the ground or a pot)

## Substrate Preparation

Fill the soaking container of ligneous material to the **2/3** and add water until submerging it.

Let it soak half hour, the time needed for the "brown composting material" to reach the given humidity level by absorbing water.

## Culture container preparation

At the bottom of the space chosen to host the mushroom patch, place a layer of corrugated cardboard or of wood chips. This will maximize the water retention and stimulate mycelium deployment.

If the patch is installed in the soil, dig a hole at least 3 inches deep to **maximize the water retention** and the mushroom culture deployment. Avoid too deep patches (over a meter deep, mycelium will start to suffocate) and prioritize sets up that are wide but not too deep. Mycelium runs way more easily at the horizontally then vertically.

## Installing the mushroom patch

Empty water from the soaking container while preserving the ligneous material now humidified.

Crumble the mycelium coming from your mushroom growing kit, from another mushroom patch or from a aging log that have grown mushroom lately. **Introduce only one variety of mycelium at the time, at a rate equal or superior to 20% of the dry weight.** If no scale is available, a rule of thumb is that a 1 Kg of mycelium can be used to inoculate a square meter mushroom patch of 10cm deep (4 inches).

**Visit our website for more detailed information.**